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10/684,001	10/10/2003	Stephen Gold	82169570	3200

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EXAMINER
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ART UNIT	PAPER NUMBER
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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.
10/684,001</td><td>Applicant(s)
GOLD ET AL.</td><td></td></tr>
<tr><td>Examiner
YAIMA CAMPOS</td><td>Art Unit
2185</td><td></td></tr>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *15 February 2012*.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5) ☒ Claim(s) *1,3-10,12-19 and 21-25* is/are pending in the application.

    5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☒ Claim(s) *1,3-10,12-19 and 21-25* is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   As per the instant Application having Application number 10/684,001, the examiner

acknowledges the applicant's submission of the amendment dated 2/15/2012. At this point,

claims 1, 17 and 22-23 have been amended and claims 2, 11, 20 and 26 stand canceled. Claims 1,

3-10, 12-19, and 21-25 are pending.

REJECTIONS BASED ON PRIOR ART

Double Patenting

> The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

> A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

> Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2.   **Claims 1, 17 and 23** are provisionally rejected under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over claim 12 (dependent from claim

10) of copending Application No. 10/684,207.

3.   Initially, it should be noted that the present application and Application No. 10/684,207,

have the same inventive entity. The assignee for both applications is Hewlett-Packard

Development Company, L.P.

4.   Claimed subject matter in the instant application is fully disclosed in the referenced

copending application and would be covered by any patent granted on that copending application

since the referenced copending application and the instant application are claiming common

subject matter, as noted below. *See In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir.*

1993).

5.   Furthermore, there is no apparent reason why applicant would be prevented from

presenting claims corresponding to those of the instant application in the other copending

application. See MPEP § 804.

6.   For example, claim 1 of the instant Application is compared with claim 12, dependent

from claim 10 of Application No. 10/684,207. (The rationale in the comparison to claim 1 show

bellow also applies to claims 17 and 23 of the instant Application.

7.   Claim 1 in the instant Application is anticipated by patent claim 12 of Application

10/684,207 in that claim 12 of Application 10/684,207 contains all the limitations of claim 1 in

the instant application; thus this rejection comprises a non-statutory obviousness type –

anticipation double patenting rejection.

Instant Application	Application 10/684,207
Claim 1 A method comprising: obtaining, by a processor, information regarding a future backup from one or more backup applications for a plurality of backup jobs, wherein the information corresponds to at least one of a backup device, a media pool used by a backup device, scratch media currently	Claims 10 A method comprising: receiving a list comprising media and at least two backup devices, wherein a first medium in the list is assigned to a first backup device, and a second medium in the list is assigned to a second backup device; ordering the list by physical location of the at least two backup devices; and

available in a backup device, scratch media currently available in a media pool, media type, compression rate, type of backup job, location of data being backed up, historical backup size, and future scheduled backup jobs;

determining, by the processor a projected number of media for a future execution of at least one of the backup jobs using the information regarding the future backup, said projected number of media being sufficient to ensure a future backup does not fail due to lack of loaded media, said determining also comprising dividing an average historical backup size of the backup job by an average capacity of a media type associated with the backup job

presenting at least the media portion of the ordered list to a user, wherein receiving the list of media comprises receiving a list of media from

a user to be used for one or more future executions of one or more backup jobs associated with the backup devices, said method further comprising, before receiving the list,

12. (Original) The method of claim 10, wherein calculating the required number of scratch media comprises for at least one of the future executions, dividing an average historical backup size of the backup job by an average capacity of a media type associated with the backup job.

displaying the projected number of media to a user; and loading a sufficient quantity of media into a backup device or media pool to result in the projected number of media being loaded.	Claim 10 calculating a required number of scratch media needed for the future executions and presenting the required number of scratch media to the user.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   **fClaims 1, 3-5, 8-10, 12-19 and 21-25** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Bolin et al. (US 5,664,146) in view of Kanai et al. (US 2002/0152181).

10.   As per **claims 1, 17 and 23**, Bolin discloses a method/system/machine readable medium

having stored thereon sequences of instructions comprising: obtaining, by a processor

information regarding a future backup from one or more backup applications for a plurality of

backup jobs, wherein the information corresponds to at least one of a backup device, a media

pool used by a backup device, scratch media currently available in a backup device, scratch

media currently available in a media pool, media type, compression rate, type of backup job,

location of data being backed up, historical backup size, and future scheduled backup jobs;

[Bolin discloses "host 100 has a task of allocating jobs to devices within PDSD (peripheral

data storage device) subsystem" (col. 3, lines 12-13) wherein common jobs for which tape

library is used comprise migration and backup of data (col. 7, lines 5-8) wherein all

cartridges are used for storage of data, and are intended to be written to or read in the

future (figure 5 and related text) wherein application programs in the host processor send

commands to task module (col. 7, line 27-48) thus information for jobs (which comprise

backup jobs) is obtained in order to allocate storage devices for said jobs]

determining, by the processor a projected number of media for a future execution of at least one

of the backup jobs using the information regarding the future backup, said projected number of

media being sufficient to ensure a future backup does not fail due to lack of loaded media and

displaying the projected number of media to a user; loading a sufficient quantity of media into a

backup device or media pool to result in the projected number of media being loaded **[Bolin**

["host 100 has a task of allocating jobs to devices within PDSD (peripheral data storage

device) subsystem" (col. 3, lines 12-13) wherein common jobs for which tape library is used

comprise migration and backup of data (col. 7, lines 5-8); *thus disclosing obtaining*

information of a job, which may be a backup job in order to allocate storage device to it. **Bolin**

also discloses "a large data set to span several hundred cartridges or cassettes in the case

where the storage medium is a tape... the entire data set are likely to be dispersed in a

plurality of storage bins located throughout the library. The cartridges are identified by

their respective volsers. Accordingly, it is critical that an operator be alerted promptly of

the need to mount or demount the cartridges containing the requested data set, in order for

the data processing to continue" (col. 2, lines 37-47)]; thus calculating or determining the

devices in a dataset (which comprises a number of devices, since the data set may span multiple

cartridges or tapes and the host must be alerted on the need to mount the devices that form the

data set) in order to perform jobs requiring processing of the dataset; which, according to Bolin's

disclosure may be back up jobs [See above]. Appellant should note that all devices in a dataset

may be necessary to perform a storage job (or more specifically, a backup job) and that the

dataset does not comprise all the tape devices in the system, but a grouping of devices; thus an

operator is alerted on a number of devices (or the devices forming the dataset) from the total

amount of devices in the system to mount in order to perform a backup job with the data set in

the form of a graphical user interface (GUI) such as the GUI shown in FIG. 5 and related text of

Bolin which comprises multiple mount messages. Therefore, disclosing determining or

calculating a projected number of devices necessary to perform a storage job or backup job, as

claimed. Bolin also teaches **["host 100 has a task of allocating jobs to devices within PDSD**

(peripheral data storage device) subsystem" (col. 3, lines 12-13) wherein common jobs for

which tape library is used comprise migration and backup of data (col. 7, lines 5-8) wherein

all cartridges are used for storage of data, and are intended to be written to or read in the

future (figure 5 and related text) wherein in step 236 in fig. 6 "a job request passed to

library manager"; *thus disclosing obtaining information of a job, which may be a backup*

job]. Bolin also teaches **[step 260 in figure 6 which can be considered as presenting a**

projected number of one media to be loaded and used (figure 6 and related text); GUI for

"alerting an operating to the need for mounting or demounting a particular data medium"

(col. 5, lines 58-63; col. 7, lines 39-40; fig. 5 and related text) in order to perform the backup job] wherein the Examiner submits that according to Bolin's disclosure, in a tape library, a mount message requesting a storage device is sent to the user or operator in response to calculating or projecting that the device is necessary for performing storage jobs, including backup jobs (within the scope of the disclosure, See Citations Above); wherein in an embodiment performing backup jobs, mount messages would only be sent to the operator for certain devices in response to estimating or projecting that those devices would be necessary. Appellant should note that as "mount messages" are presented to the operator such as mount messages shown in (FIG. 5 of Bolin), said mount messages are sent in order to have tape devices (or a calculated projected number of tape devices) mounted in the system in order to perform requested jobs, which may be backup jobs. The calculated projected number… using the backup job (as claimed) may be any number of devices necessary to perform said job, including one device. As mount messages requesting one tape device (in order to perform job or backup job) are sent, the library as taught by Bolin is calculating a projected number... using the backup, which may be one or any number of devices requested for mount or projected necessary.

Bolin does not explicitly disclose the details of "said <u>determining</u> also comprising dividing an average historical backup size of the backup job by an average capacity of a media type associated with the backup job".

Kanai discloses a plurality of backup jobs wherein "said calculating also comprising dividing an average historical backup size of the backup job by an average capacity of a media type associated with the backup job" as **["providing the estimation of future storage usage of the user by the rental storage service provider based on the history of storage usage of the**

user; and reporting the estimation to the storage user" (Page 1, Pars. 0018-0019; Pars.

0202, 0225 and 0234) wherein "the rental storage service provider 2 will estimate the future

usage of storage data based on the history record of the usage data stored in the storage

device(s) to report to the rental storage service user 1 the estimation" (Page 4; Par. 0091;

Figure 2 and related text). See recommended capacity graph (Page 8, Par. 0176 and Figure

17)].

Bolin et al. (US 5,664,146) and Kanai et al. (US 2002/0152181) are analogous art

because they are from the same field of endeavor of computer memory access and control.

At the time of the invention it would have been obvious to a person of ordinary skill in

the art to modify the storage management method/system as taught by Bolin and further provide

details of a plurality of backup jobs and said calculating comprising, for at least one of the future

executions, dividing an average historical backup size of the backup job by an average capacity

of a media type associated with the backup job as disclosed by Kanai.

The motivation for doing so would have been because Kani discloses **[that rented**

storage allows users to be released from the burden of maintenance of store and thereby

have less responsibility of administration (Par. 0005) wherein "the contract user will have

the amount of data more than the currently contracted capacity of 300GB… this display

screen may provide the user interface which is very easy to operate and easy to understand

for the rental storage service users" (Pages 8-9; Par. 0176)].

Therefore, it would have been obvious to combine Kanai et al. (US 2002/0152181) with

Bolin et al. (US 5,664,146) for the benefit of creating a method/system medium having stored

thereon sequences of instructions to obtain the invention as specified in claims 1, 17 and 23.

11.   As per **claim 3**, the combination of Bolin and Kanai discloses the method of claim 1,

wherein obtaining the information regarding the future backup further comprises obtaining

information for one or more backup devices, each backup device associated with at least one of

the backup jobs **[Bolin discloses all cartridges are used for storage of data wherein each**

device as shown in figure 5 corresponds to a storage job (figure 5 and related text; col. 7,

lines 1-26)].

12.   As per **claim 4**, the combination of Bolin and Kanai discloses the method of claim 3,

wherein presenting the projected number of media comprises presenting the projected number of

media required for each of the backup devices **[Bolin discloses wherein step 260 in figure 6 is**

can be considered as presenting a projected number of media to be loaded and used (figure

6 and related text); GUI for "alerting an operating to the need for mounting or demounting

a particular data medium" (col. 5, lines 58-63; col. 7, lines 39-40)].

13.   As per **claim 5**, the combination of Bolin and Kanai discloses the method of claim 1,

wherein obtaining the information regarding the future backup further comprises obtaining

information for one or more media pools, each media pool associated with at least one of the

backup jobs **[Bolin discloses migration and backup of data (col. 7, lines 5-8) wherein all**

cartridges are used for storage of data, and are intended to be written to or read in the

future (figure 5 and related text) wherein application programs in the host processor send

commands to task module (col. 7, line 27-48). The embodiment of figure 4 also covers

individual media pools (col. 7, line 64-col. 8, line 3) and explains library dataserver

displaying mount messages for a tape subsystem forming part of a plurality of tape

subsystems (col. 9, lines 3-36; figures 4-5 and related text)].

14.   As per **claims 8, 18-19 and 24-25**, the combination of Bolin and Kanai discloses the
method of claim 5, wherein presenting the projected number of media comprises presenting the
projected number of media for each of the media pools **[Bolin discloses library dataserver
displaying mount messages for a tape subsystem forming part of a plurality of tape
subsystems (col. 9, lines 3-36; figures 4-5 and related text) wherein step 260 in figure 6 can
be considered as presenting a projected number of media to be loaded and used (figure 6
and related text)]**.

15.   As per **claim 9**, the combination of Bolin and Kanai discloses the method of claim 5,
wherein calculating further comprises using the media pool information to analyzing historical
usage of the media pools as **[Kanai discloses "providing the estimation of future storage
usage of the user by the rental storage service provider based on the history of storage
usage of the user; and reporting the estimation to the storage user" (Page 1, Pars. 0018-
0019; Pars. 0202, 0225 and 0234)]**.

16.   As per **claim 10**, the combination of Bolin and Kanai discloses the method of claim 5,
further comprising presenting a report to the user identifying at least one media pool having a
greater amount of media than the projected number of media for the at least one media pool
**[Bolin discloses eject messages for media that is not required to be included in the
projected number of media for future storage jobs (figure 5 and related text)]**.

17.   As per claims **12-13**, the combination of Bolin and Kanai discloses The method of claim
1, further comprising: wherein obtaining the information regarding the future backup further
comprises obtaining information for one or more media pools, each media pool associated with
the backup jobs; and wherein calculating the projected number of media further comprises

totaling the number of media projected for each media pool to be used by the future execution;

wherein the obtaining the information regarding the future backup further comprises obtaining

information for one or more backup devices associated with the backup jobs; and wherein

calculating the projected number of media further comprises totaling the projected number of

media for each backup device to be used by the future execution **[Bolin discloses migration and**

backup of data (col. 7, lines 5-8) wherein all cartridges are used for storage of data, and are

intended to be written to or read in the future (figure 5 and related text) and step 260 in

figure 6 is can be considered as presenting a projected number of one media to be loaded

and used (figure 6 and related text); GUI for "alerting an operating to the need for

mounting or demounting a particular data medium" (col. 5, lines 58-63; col. 7, lines 39-40)

and explains having different tape pools (figure 4 and related text). Kanai discloses

"providing the estimation of future storage usage of the user by the rental storage service

provider based on the history of storage usage of the user; and reporting the estimation to

the storage user" (Page 1, Pars. 0018-0019; Pars. 0202, 0225 and 0234) wherein "the rental

storage service provider 2 will estimate the future usage of storage data based on the

history record of the usage data stored in the storage device(s) to report to the rental

storage service user 1 the estimation" (Page 4; Par. 0091; Figure 2 and related text). See

recommended capacity graph (Page 8, Par. 0176 and Figures 17 and 28) wherein the total

capacity of the storage system is shown and the total recommend capacity for certain time

periods is also shown].

18.   As per **<u>claim 14</u>**, the combination of Bolin and Kanai discloses the method of claim 1,

wherein calculating further comprises calculating the projected number of media for the future

execution of the backup jobs scheduled within a predetermined period of time **[Bolin discloses all cartridges are used for storage of date wherein they are intended to be written to or read in the future (figure 5 and related text) wherein step 260 in figure 6 can be considered as presenting a projected number of media to be loaded and used within a predetermined period of time (figure 6 and related text); note eject messages are sent to the user when media is not longer necessary. Furthermore, Kanai discloses estimation of future storage based on usage history of the user (Page 1, Pars. 0018-0019)]**.

19.   As per **<u>claims 15 and 21</u>**, the combination of Bolin and Kanai discloses the method of claim 1, further comprising receiving from the user a list of one or more media to be used **[Bolin discloses cartridge (col. 9, line 51-col. 10, line 43; figure 5 and related text)]**.

20.   As per **<u>claims 16 and 22</u>**, the combination of Bolin and Kanai discloses the method of claim 15, further comprising for each media in the list, determining if the media is a valid media **[Bolin discloses "if the wrong volser has been mounted, the host issues a demount job and then reissues a mount job, starting from step 236" (col. 11, line 52-54)]**.

21.   **<u>Claims 6-7</u>** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolin et al. (US 5,664,146) in view of Kanai et al. (US 2002/0152181) as applied to claims 1 and 5 above, and further in view of Carlson et al. (US 2004/0044862).

22.   As per **<u>claim 6</u>**, the combination of Bolin and Kanai discloses the method of claim 5, but does not disclose expressly the details of calculating comprises, for each media pool: determining an existing number of media in the media pool; calculating the projected number of

media for the future execution using the media pool; and subtracting the existing number from

the projected number.

Carlson discloses of calculating comprises, for each media pool: determining an existing

number of media in the media pool; calculating the projected number of media for the future

execution using the media pool; and subtracting the existing number from the projected number

as [**"a system administrator may move physical volumes from one storage pool to another**

when managing the tape cartridges in the storage pools. This may be performed if a

determination is made that one storage pool needs additional tapes due to an anticipated

increase of data maintained in that pool, or one pool needs fewer tape cartridges due to an

anticipated decrease in data directed toward that pool" (Page 3, Par. 0044) and details

moving a number of physical volumes from a source pool to a target pool (figures 9-10 and

related text)].

Bolin et al. (US 5,664,146), Kanai et al. (US 2002/0152181) and Carlson et al. (US

2004/0044862) are analogous art because they are from the same field of endeavor of computer

memory access and control.

At the time of the invention it would have been obvious to a person of ordinary skill in

the art to modify the storage management method/system as taught by the combination of Bolin

and Kanai and further calculating a projected number of media by determining an existing

number of media in the media pool; calculating the projected number of media for the future

execution using the media pool; and subtracting the existing number from the projected number

as disclosed by Carlson.

The motivation for doing so would have been because Carlson discloses calculating a

projected number of media by determining an existing number of media in the media pool;

calculating the projected number of media for the future execution using the media pool; and

subtracting the existing number from the projected number is done to maintain the optimal

number of cartridges in a storage pool **[(par. 0044)]**.

Therefore, it would have been obvious to combine Kanai et al. (US 2002/0152181) with

Bolin et al. (US 5,664,146) and Carlson et al. (US 2004/0044862) for the benefit of creating a

method/system medium having stored thereon sequences of instructions to obtain the invention

as specified in claim 6.

23.   As per **claim 7**, the combination of Bolin, Kanai and Carlson discloses the method of

claim 6, wherein determining the existing number further comprises determining if a protected

period for one or more existing data media has expired **[Kanai discloses "the reporting process**

will also be executed if a predetermined period of time has expired" (Par. 0158) which

comprises a time period for the contract for data storage].

ACKNOWLEDGMENT OF ISSUES RAISED BY THE APPLICANT

Response to Amendment

24.   Applicant's arguments filed on 2/15/2012 regarding non-functional descriptive material

have been fully considered and are deemed persuasive, thus, the rejection for non-functional

descriptive material is herein withdrawn.

25.   Applicant's arguments files on 2/15/2012 regarding the 35 USC 103 rejection of the

claims have been fully considered but they are not deemed persuasive.

26.   As required by **M.P.E.P. § 707.07(f)**, a response to these arguments appears below.

ARGUMENTS CONCERNING PRIOR ART REJECTIONS

27.   Claims must be given the broadest reasonable interpretation during examination and

limitations appearing in the specification but not recited in the claim are not read into the claim

(See M.P.E.P. 2111 [R-1]).

28.   Applicant argues that Bolin's does not teach "obtaining information regarding a future

backup from one or more backup applications... calculating... a projected number... using the

information regarding the future backup".

        In response, these arguments have been fully considered, but are not deemed persuasive.

        In response to applicant's arguments against the references individually, one cannot show

nonobviousness by attacking references individually where the rejections are based on

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re*

Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

        The Examiner would like to respectfully point out that the pending claims have been

rejected under 35 USC 103 obviousness type rejection over Bolin in view of Kanai; wherein the

combination of Bolin and Kanai discloses obtaining "information regarding a future backup from

one or more backup applications" as Bolin discloses **["host 100 has a task of allocating jobs to**

devices within PDSD (peripheral data storage device) subsystem" (col. 3, lines 12-13)

wherein common jobs for which tape library is used comprise migration and backup of

data (col. 7, lines 5-8) wherein all cartridges are used for storage of data, and are intended

to be written to or read in the future (figure 5 and related text) wherein application

programs in the host processor send commands to task module (col. 7, line 27-48)]; thus

information for jobs (which comprise backup jobs) is obtained in order to allocate storage

devices for said jobs. Kanai further discloses this limitation as **["providing the estimation of**

future storage usage of the user by the rental storage service provider based on the history

of storage usage of the user; and reporting the estimation to the storage user" (Page 1,

Pars. 0018-0019; Pars. 0202, 0225 and 0234) wherein "the rental storage service provider 2

will estimate the future usage of storage data based on the history record of the usage data

stored in the storage device(s) to report to the rental storage service user 1 the estimation"

(Page 4; Par. 0091; Figure 2 and related text). See recommended capacity graph (Page 8,

Par. 0176 and Figure 17)]. Appellant should note that saving/storing data by a user within

rental storage system comprises backup procedures from one or more backup applications and

that as it is estimated the future storage usage of the user for the rental storage by the rental

storage service provider, the rental storage service provider considers either directly/indirectly

"backup job information from one or more backups applications for a plurality of backup jobs,"

as it considers "history of usage"; and provides an estimate of storage that the user will need in

order to accommodate backup jobs by the user to the rental storage.

Based on a first interpretation, Bolin discloses "calculating a projected number... using

the information regarding the future backup" as **["host 100 has a task of allocating jobs to**

devices within PDSD (peripheral data storage device) subsystem" (col. 3, lines 12-13)

wherein common jobs for which tape library is used comprise migration and backup of

data (col. 7, lines 5-8); *thus disclosing obtaining information of a job, which may be a backup*

job in order to allocate storage device to it. **Bolin also discloses "a large data set to span**

several hundred cartridges or cassettes in the case where the storage medium is a tape... the entire data set are likely to be dispersed in a plurality of storage bins located throughout the library. The cartridges are identified by their respective volsers. Accordingly, it is critical that an operator be alerted promptly of the need to mount or demount the cartridges containing the requested data set, in order for the data processing to continue" (col. 2, lines 37-47)]; thus calculating or determining the devices in a dataset (which comprises a number of devices, since the data set may span multiple cartridges or tapes and the host must be alerted on the need to mount the devices that form the data set) in order to perform jobs requiring processing of the dataset; which, according to Bolin's disclosure may be back up jobs [See above]. Appellant should note that all devices in a dataset may be necessary to perform a storage job (or more specifically, a backup job) and that the dataset does not comprise all the tape devices in the system, but a grouping of devices; thus an operator is alerted on a number of devices (or the devices forming the dataset) from the total amount of devices in the system to mount in order to perform a backup job with the data set in the form of a graphical user interface (GUI) such as the GUI shown in FIG. 5 and related text of Bolin which comprises multiple mount messages. Therefore, disclosing determining or calculating a projected number of devices necessary to perform a storage job or backup job, as claimed.

Additionally, based on another interpretation, Bolin discloses "calculating a projected number... using the information regarding the future backup" as **["host 100 has a task of allocating jobs to devices within PDSD (peripheral data storage device) subsystem" (col. 3, lines 12-13) wherein common jobs for which tape library is used comprise migration and backup of data (col. 7, lines 5-8) wherein all cartridges are used for storage of data, and are**

intended to be written to or read in the future (figure 5 and related text) wherein in step 236 in fig. 6 "a job request passed to library manager"; *thus disclosing obtaining information of a job, which may be a backup job*]. Bolin also teaches **[step 260 in figure 6 which can be considered as presenting a projected number of one media to be loaded and used (figure 6 and related text); GUI for "alerting an operating to the need for mounting or demounting a particular data medium" (col. 5, lines 58-63; col. 7, lines 39-40; fig. 5 and related text) in order to perform the backup job]** wherein the Examiner submits that according to Bolin's disclosure, in a tape library, a mount message requesting a storage device is sent to the user or operator in response to calculating or projecting that the device is necessary for performing storage jobs, including backup jobs (within the scope of the disclosure, See Citations Above); wherein in an embodiment performing backup jobs, mount messages would only be sent to the operator for certain devices in response to estimating or projecting that those devices would be necessary. Appellant should note that as "mount messages" are presented to the operator such as mount messages shown in (FIG. 5 of Bolin), said mount messages are sent in order to have tape devices (or a calculated projected number of tape devices) mounted in the system in order to perform requested jobs, which may be backup jobs. The calculated projected number... using the backup job (as claimed) may be any number of devices necessary to perform said job, including one device. As mount messages requesting one tape device (in order to perform job or backup job) are sent, the library as taught by Bolin is calculating a projected number... using the backup, which may be one or any number of devices requested for mount or projected necessary.

Kanai clearly discloses "calculating a required number of scratch media needed for one or more future executions of the… backup jobs," as **["providing the estimation of future storage usage of the user by the rental storage service provider based on the history of storage usage of the user; and reporting the estimation to the storage user" (Page 1, Pars. 0018-0019; Pars. 0202, 0225 and 0234)]**. Appellant should note that saving/storing data by a user within rental storage system comprises backup procedures from one or more backup applications; therefore, when estimating the number of future storage usage by a user; the rental storage service provider is calculating required number of media needed for one or more future executions of backup jobs. Appellant should further note that the total space necessary for a future execution of a backup job or any other storage job is directly proportional to the number of devices in the system when using a tape storage system such as the storage system taught by Bolin. More specifically, when combining Kanai with Bolin, the total amount of storage estimated necessary by Kanai may be expressed to the user as a number of devices to mount in an interface such in GUI (graphical user interface) taught by Bolin in Figure 5 in the form of mount messages displayed in the user interface to the operator.

Regarding all other Claims not specifically traversed above and whose rejections were upheld, the Applicant contends that the listed claims are allowable by virtue of their dependence on other allowable claims. As this dependence is the sole rationale put forth for the allowability of said dependent claims, the Applicant is directed to the Examiner's remarks above. Additionally, any other arguments the Applicant made that were not specifically addressed in this Office Action appeared to directly rely on an argument presented elsewhere in the Applicant's response that was traversed, rendered moot or found persuasive above.

All arguments by the applicant are believed to be covered in the body of the office action; thus, this action constitutes a complete response to the issues raised in the remarks dated 2/15/2012.

CLOSING COMMENTS

29.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Examiner's Note

30.   Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially

teaching all or part of the claimed invention, as well as the context of the passage as taught by

the prior art or disclosed by the examiner.

Conclusion

a. **STATUS OF CLAIMS IN THE APPLICATION**

31.   The following is a summary of the treatment and status of all claims in the application as

recommended by **M.P.E.P. 707.07(i)**:

a(1) CLAIMS REJECTED IN THE APPLICATION

32.   Per the instant office action, claims 1, 3-10, 12-19, and 21-25 received an action on the

merits and are subject of a final rejection.

a(2 CLAIMS NO LONGER UNDER CONSIDERATION

33.   Claims 2, 11, 20 and 26 have been canceled.

b. **DIRECTION OF FUTURE CORRESPONDENCES**

34.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Yaima Campos whose telephone number is (571) 272-1232. The

examiner can normally be reached on Monday to Friday 8:30 AM to 5:00 PM.

IMPORTANT NOTE

35.   If attempts to reach the above noted Examiner by telephone are unsuccessful, the

Examiner's supervisor, Mr. Sanjiv Shah, can be reached at the following telephone number: Area

Code (571) 272-4098.

The fax phone number for the organization where this application or proceeding is

assigned is 571-273-8300. Information regarding the status of an application may be obtained

from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For more

information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions

on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-

9197 (toll-free).

March 29, 2012   /Yaima Campos/
                                                                 Primary Examiner, Art Unit 2185